

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Tadao MICHISHITA, et al.

SERIAL NO: New Application

GAU:

FILED: Herewith

EXAMINER:

FOR: ULTRAVIOLET IRRADIATION APPARATUS FOR PHOTOCHEMICAL REACTION AND PREPARATION  
PROCESS OF VITAMIN D DERIVATIVE MAKING USE OF THE SAME

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references were provided in parent application Serial No. 09/720,806 filed January 3, 2001, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



Gregory J. Maier

Registration No. 25,599

Customer Number

**22850**

Tel. (703) 413-3000  
Fax. (703) 413-2220  
(OSMMN 05/03)  
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Akihiro Yamazaki

Registration No. 46,155

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 246111US2DIV		SERIAL NO. New Application	
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Tadao MICHISHITA, et al.			
				FILING DATE Herewith		GROUP	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
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FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO		
	AE	8-332372	12/17/96	JAPAN			
	AF	3-60733	03/15/91	JAPAN			
	AG	3-284346	12/16/91	JAPAN			
	AH	49-14541	02/08/74	JAPAN			
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	AJ	63-58203	04/18/88	JAPAN			
	AK	61-176227	11/04/86	JAPAN			
	AL	2-3695	01/09/90	JAPAN			
	AM	10-72432	03/17/98	JAPAN			
	AN	4-89474	03/23/92	JAPAN			
	AO	3-188061	08/16/91	JAPAN (with English Abstract)			X
	AP	6-72994	03/15/94	JAPAN (with English Abstract)			X
	AQ	6-80626	03/22/94	JAPAN (with English Abstract)			X
	AR	4-89473	03/23/92	JAPAN (with English Abstract)			X
	AS	4-89475	03/23/92	JAPAN (with English Abstract)			X
	AT	4-89476	03/23/92	JAPAN (with English Abstract)			X
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	AU	V. MALATESTA, et al., J. Am. Chem. Soc., vol. 103, pages 6781-6783, "LASER PHOTOCHEMICAL PRODUCTION OF VITAMIN D", 1981					
	AV	Masami OKABE, et al., J. Org. Chem., vol. 60, no. 3, pages 767-771, "SYNTHESIS OF 25-HYDROXYCHOLECALCIFER-16-en-23-ynol: A POTENTIAL ANTIPSORIATIC AGENT", 1995					
	AW	Tadashi SATO, et al., J. Nutr. Sci. Vitaminol., vol. 26, no. 6, pages 545-555, "EFFECT OF WAVELENGTH ON THE FORMATION OF 1 $\alpha$ -HYDROXYPREVITAMIN D <sub>3</sub> IN THE ULTRAVIOLET IRRADIATION OF CHOLESTA-5,7-DIENE-1 $\alpha$ , 3 $\beta$ -DIOL AND USE OF A FILTER SOLUTION IN THE PHOTOCHEMICAL REACTION IN THE SYNTHESIS OF 1 $\alpha$ -HYDROXY-VITAMIN D <sub>3</sub> ", 1980					
	AX	William G. DAUBEN, et al., J. Am. Chem. Soc., vol. 104, pages 5780-5781, "EFFECTS OF WAVELENGTH ON THE PHOTOCHEMISTRY OF PROVITAMIN D <sub>3</sub> ", 1982					
	AY	William G. DAUBEN, et al., J. Am. Chem. Soc., vol. 110, no. 8, pages 2548-2553, "TRIENE PHOTOPHYSICS AND PHOTOCHEMISTRY: PREVITAMIN D <sub>3</sub> ", 1988					
	AZ	J.A. KEVERLING BUISMAN, et al., Journal of Pharmaceutical Sciences, vol. 57, no. 8, pages 1326-1329, "EVALUATION OF THE EFFECT OF ISOMERIZATION ON THE CHEMICAL AND BIOLOGICAL ASSAY OF VITAMIN D", August 1968					
Examiner					Date Considered		
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,516,970	05/14/96	P. L. MILLER, et al.			
	AB	5,374,405	12/20/94	D. FIRNBERG, et al.			
	AC						
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FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES                      NO		
	AO	855 397	01/08/53	GERMANY			X
	AP	40 14 363	11/07/91	GERMANY			X
	AQ	249864	07/31/47	SWITZERLAND			X
	AR	0 967 202	12/29/99	EUROPE			X
	AS	WO 99/39132	08/05/99	WIPO			
	AT						
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	AV						
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	AW	<div style="border: 1px solid black; height: 100px; width: 100%;"></div>					
	AX						
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Examiner					<input type="checkbox"/> Additional References sheet(s) attached		
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	AA	3,638,312	2/1972	Szwarc et al.			
	AB	4,702,994	10/1987	Rendulic et al.			
	AC	5,748,288	5/1998	Nagano et al.			
	AD	5,906,429	5/1999	Mori et al.			
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